



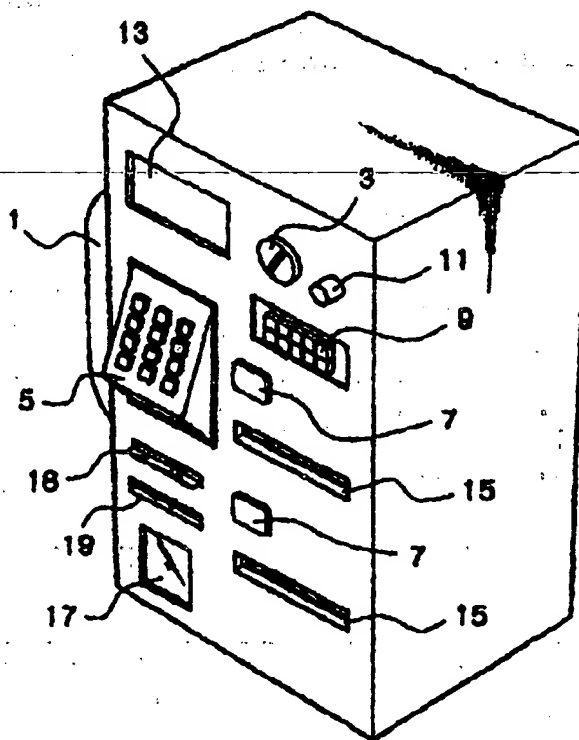
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/KR99/00315</p> <p>(22) International Filing Date: 19 June 1999 (19.06.99)</p> <p>(30) Priority Data: 1998/23263 20 June 1998 (20.06.98) KR</p> <p>(71)(72) Applicant and Inventor: KIM, Hak, Soo [KR/KR]; 601-1005, HanYang Apt., 59-5, Ssangmoon-dong, Dobong-ku, Dobong-ku, Seoul 132-030 (KR).</p> <p>(74) Agent: KIM, Sung-Ki; Daechang Building, 2nd floor, 827-66, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>	

(54) Title: PUBLIC TELEPHONE WITH AUTOMATIC VENDING MACHINE

## (57) Abstract

The present invention relates to a public telephone which in addition to providing the functions of current telephones, not only provides a display area where advertisements and/or public information messages, but also provides vending machine function. The public telephone in accordance with the present invention comprising: a handset, a coin and/or card insertion slot, a button for selecting a telephone number, a button for selecting a good, a button for selecting a number of goods, a button for selecting the telephone function or the automatic vending function, further including: a function selecting unit for outputting a signal corresponding to whether the user selects the telephone function or the automatic vending function by the goods selecting button; and money kind discriminating part for discriminating whether the inserted material by the user is coin, paper money or a card.



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## PUBLIC TELEPHONE WITH AUTOMATIC VENDING MACHINE

## TECHNICAL FIELD

5       The present invention relates to a public telephone, and, in particular to a public telephone which in addition to providing the functions of current telephones, not only provides a display area where advertisements and/or public information messages may be displayed, but also provides the function of an automatic vending machine.

## 10    BACKGROUND ART

          Generally, a current public telephone contains throughout its main frame a handset, a handset holder, a coin and/or card insertion slot, a coin exchange slot, an amount indicator, and a dial keypad plus special function buttons(herein referred to as  
15 'key buttons'). Despite the simplicity of the functions of the current telephones compared its size, the fact that the various elements are scattered throughout the main frame causes current telephones to occupy a large amount of space to serve its purpose. Therefore, the space occupied by the current telephones ultimately is a waste in terms of efficient space utilization.

20

          Meanwhile, due to the fact that a large number of persons use public telephones, and that users would be observing the telephone for long times while making a call, and that public telephones are usually located in areas where a large number of people pass through and thereby easily attract the attention of passerby, the public telephone is in  
25 itself an excellent medium for advertisement.

## SUMMARY OF THE INVENTION

          The present invention is disclosed to solve the aforementioned problems and it is  
30 an object of the present invention to provide a public telephone which in addition to providing the functions of current telephones, provides the function of an automatic

vending machine, for example, a telephone card, a lottery ticket, a token and a tissue.

It is another object of the present invention to provide a public telephone which in addition to providing the functions of current telephones, provides a display area  
5 where advertisements and/or public information messages may be displayed.

In order to achieve the above-objects, the present invention provides a public telephone comprising: a handset, a coin and/or card insertion slot, a button for selecting a telephone number, a button for selecting a goods, a button for selecting a number of  
10 goods, a button for selecting a telephone function or an automatic vending function, further including: a function selecting unit for outputting a signal corresponding to whether an user selects the telephone function or the automatic vending function by the goods selecting button; a first display unit for displaying the telephone function or the automatic vending function according to the output signal from the function selecting  
15 unit; a goods selecting unit for outputting a signal corresponding to a kind of goods selected by the goods selecting button of the automatic vending function; a second display unit for displaying name, price of the selected goods and whether the selected goods can be sold or not according to the output signal from the goods selecting unit; a money kind discriminating unit for discriminating whether the inserted material by the  
20 user is coin, paper money or a card; a third display unit for displaying an amount inserted by the user and/or for displaying a kind of the inserted card and a card number; a number of goods selecting means for outputting a signal corresponding to the number of selected goods by the user; and a goods outputting unit for outputting goods as many as the number of selected goods by the user according to the output signal from the  
25 number of goods selecting unit.

Because the function selecting unit includes a button for selecting the automatic vending function, it is preferable that a telephone function is performed when the handset is held and that the automatic vending machine function is performed when the  
30 button for selecting the automatic vending function is pressed.

Furthermore, it is preferable that the first, second and third display units are consisted of one display element and that the telephone number button and the number of goods selecting button are the same key button part.

5 Further, it is preferable that a display area is disposed on the outside of the public telephone to be attached advertisement materials thereto.

### BRIEF DESCRIPTION OF THE DRAWINGS

- 10 Fig. 1 is a perspective view showing an outside according to the present invention.  
Fig. 2 is a block diagram according to the present invention.  
Fig. 3 is a perspective view showing an outside according to another embodiment of the present invention.

### 15 DISCLOSURE OF INVENTION

By referring to drawings the desirable operational embodiments of the present invention will now be described in detail.

Referring to Fig. 1, a public telephone according to the present invention  
20 includes a handset 1, a coin insertion slot 3, a paper money insertion slot 18, a card insertion slot 19, a telephone number button 5, a coin exchange slot 17, a goods selecting button 7, a number of goods selecting button 9, a function selecting button 11 for selecting whether the user selects a telephone function or an automatic vending function, a display unit 13 for displaying various information messages and a goods  
25 outputting unit 15.

In the present invention, the telephone number button 5 and the number of goods selecting button 9 are shown to separate from each other. However, the same key button can be used to perform the telephone number button for the telephone function as well  
30 as the number of goods selecting button for the automatic vending function.

The display unit 13 is served to display various messages according to the program intended by the designer. First, when the user holds the handset 1, a guide message like 'this telephone provides the general public telephone function as well as the automatic vending function' and 'the use of the automatic vending machine'. If the telephone function is selected, the inserted amount, the remained amount and an amount to be exchanged can be displayed like the general public telephone. When the automatic vending function is selected, goods list, whether the selected goods can be sold or not, the price of the selected goods and the number of selected goods can be displayed.

Referring to Fig. 2, an operational effect of the present invention will now be described.

First, when the user selects the telephone function or the automatic vending function by the function selecting button, the function selecting unit 21 outputs a signal corresponding to the selected function by the user. For example, a low level signal "0" is outputted to the first display unit 23 when the telephone function is selected, and a high level signal "1" is outputted to the first display unit 23 when the automatic vending function is selected. Alternatively, a mechanical switch or a relay can be used to control the line of electric power. Furthermore, to more simplification of function, we can apply the method that the telephone function is performed when the user holds the handset 1, and the telephone function is converted to the automatic vending function only when the user presses the button 11.

When the telephone function or the automatic vending function is selected, the result selected is displayed on the first display unit 23 in order for the user to discriminate this fact, and, at the same time, the telephone unit 25 or the automatic vending unit 26 is operated. As the foregoing description, the first display unit 23 displays the message that the telephone function is established, and an inserted amount, a remained amount and an amount to be exchanged when the telephone function is selected, and displays the message that the automatic vending function is established, and goods list, whether the selected goods can be sold or not, the price of the selected

goods and the number of selected goods. These depend the designer's choice.

The telephone unit 25 is served to perform an operation same as the general telephone, and accordingly, the description therefor is omitted herein.

The automatic vending unit 26 as shown in Fig. 2 will now be described in detail.

If the user selects the automatic vending function by the function selecting button 11 and selects the kind of goods by the goods selecting button 7, the goods selecting unit 27 outputs a signal corresponding to the selected result by the user. The kind of goods may be various kinds of telephone cards, various kinds of lottery tickets, various kinds of tissues and various kinds of tokens for bus. Furthermore, all kinds of the above descriptions may be prepared to sell. These depend to the designer's demand.

The signal corresponding to the kind of goods is outputted from the goods selecting unit 27 to control a container opening/closing unit(not shown) keeping in custody of the selected goods therein, and, at the same time, outputted to the second display unit 29 to display the name of and the price of the selected goods, and whether the selected goods can be sold or not. The display for whether the selected goods can be sold or not is for the user to discriminate whether the selected goods can be sold or is sold out. These can be displayed on another display unit(not shown) not the second display unit 29 in order for the user to always easily discriminate.

When the user inserts the coin, paper money and/or a card to the coin insertion slot 3, the paper money insertion slot 18 and/or the card insertion slot 19 according to the message on the second display unit 29, the money kind discriminating unit 31 discriminates what a kind of inserted material is and outputs a signal corresponding to the inserted material.

Therefore, if the coin or paper money is inserted, the signal outputted from the

money kind discriminating unit 31 is sent to the third display unit 33 to display the fact and if the card is inserted, the signal outputted from the money kind discriminating unit 31 is sent to the third display unit 33 to display a kind of card and the card number.

5           Meanwhile, it is preferable that all of the first, second and third display units 23, 29 and 33 are disposed at one display member. For example, it is preferable that the display units 23, 29 and 33 are disposed at one Liquid Crystal Display panel to display the above facts in order.

10           Next, when the user selects the desired number of the goods via the number of goods selecting button 9, a signal corresponding to the number of selected goods is outputted from the number of goods selecting unit 35. As the foregoing description, it is preferable that the number of goods selecting button 9 and the telephone number button 5 are used by one unit.

15           The signal corresponding to the number of selected goods is outputted from the number of goods selecting part 35, and then the goods as many as the selected goods are outputted by the goods outputting means 37. Meanwhile, to generate each different signal according to the number of goods, several methods can be applied. For example,  
20           if a signal that the number of pulse is different according to the number of goods, the container opening/closing unit in keeping of the goods as many as the number of pulse by counting the number of pulse can be manipulated.

          Another embodiment of the present invention will now be described.

25           Fig. 3 is a perspective view showing an outside according to the another embodiment of the present invention.

          In this embodiment, an advertisement display area 16 is disposed in addition to  
30           the first embodiment. The advertisement display area 16 is served to attach materials for advertisements. The material may be an advertisement plate for the goods to sell as



well as be various messages for information.

Having described specific preferred embodiment of the present invention with reference to the accompanying drawings, it is to be understood that various changes and  
5 modifications may be effected therein by one skilled in the art without departing from the scope of spirit of the present invention as defined in the appended claims.

#### INDUSTRIAL APPLICABILITY

10 As the foregoing description, a public telephone of the present invention with its display features and vending function in addition to current telephone features will increase the space utilization efficiency of the public telephone. In other words, through the installation of the public telephone of the present invention in public areas a more effective means of public announcement and information may be offered, while  
15 installation in private companies and recreational facilities will offer a more effective means for company advertisements and promotional ads to be displayed. Further, a public telephone of the present invention will increase the space utilization efficiency of the public telephone because it provides the automatic vending machine function for various goods.

20

The advertisements on the public telephone of the present invention will also attract the attention of the users and waiting persons more effectively than those displayed elsewhere, thereby having a more profound effect compared to other  
25 advertisements.

25

## CLAIMS :

1. A public telephone comprising: a handset, a coin and/or card insertion slot, a button for selecting a telephone number, a button for selecting a goods, a button for selecting a number of goods, a button for selecting a telephone function or an automatic vending function, further including:

function selecting means for outputting a signal corresponding to whether an user selects the telephone function or the automatic vending function by the goods selecting button;

first display means for displaying the telephone function or the automatic vending function according to the output signal from the function selecting means;

goods selecting means for outputting a signal corresponding to a kind of goods selected by the goods selecting button of the automatic vending function;

second display means for displaying name, price of the selected goods and whether the selected goods can be sold or not according to the output signal from the goods selecting means;

money kind discriminating means for discriminating whether the inserted material by the user is coin, paper money or card,

third display means for displaying an amount inserted by the user and/or for displaying a kind of inserted card and a card number;

number of goods selecting means for outputting a signal corresponding to the number of selected goods by the user; and

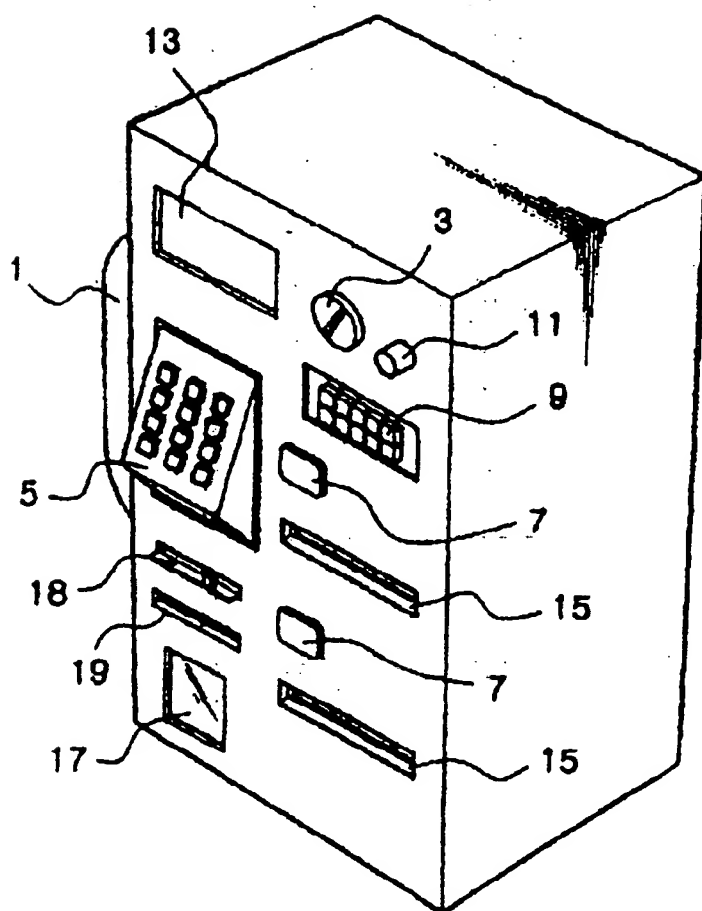
goods outputting means for outputting goods as many as the number of selected goods by the user according to the output signal from the number of goods selecting means.

2. The public telephone in accordance with claim 1, wherein said function selecting means includes a selecting button for the automatic vending function so that a telephone function is performed when the user holds the handset and the automatic vending function is performed when the selecting button is pressed.

3. The public telephone in accordance with claim 1, wherein said first, second and third display unit are disposed at one display member.
4. The public telephone in accordance with claim 1, wherein said telephone number  
5 button and the number of goods selecting button are the same part.
5. The public telephone in accordance with claim 1, further includes a display area for advertisements.

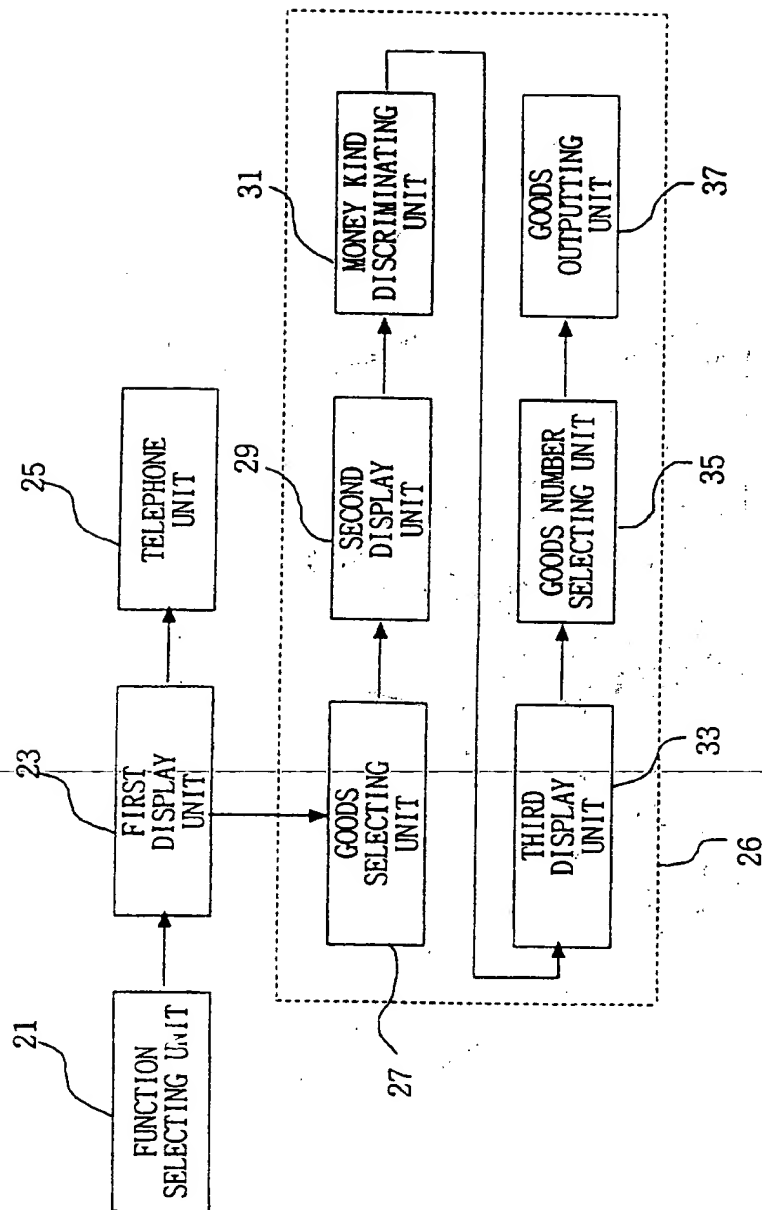
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FIG. 1



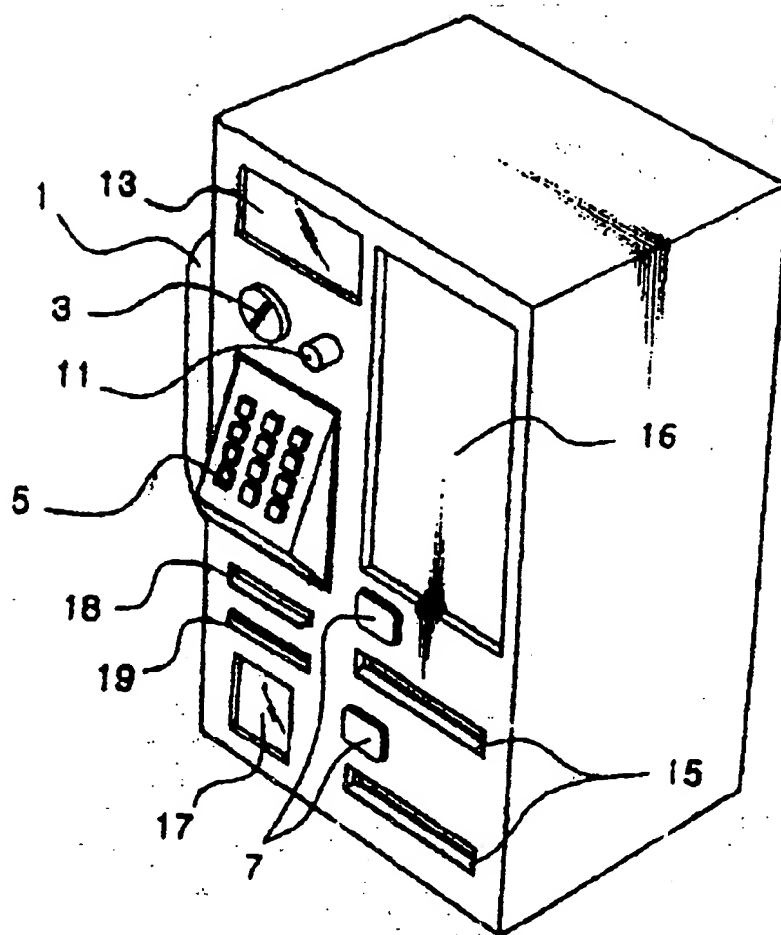
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FIG. 2



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FIG. 3



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 99/00315

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>6</sup>: G 07 F 9/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>6</sup>: G 07 F 9/00, G 07 F 9/02, G 07 F 9/10, G 07 F 15/00, G 07 F 15/12, G 07 F 17/24, G 07 F 17/26, G 07 F 17/28, G 07 F 17/40, G 07 F 17/42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 03-271894 (KUBOTA CORP) 12 March 1991 (12.03.91) (abstract) [online] [retrieved on 11 November 1999 (11.11.99)]. Retrieved from the Internet: <URL: <a href="http://www.patents.ibm.com/cgi-bin/viewpat.cmd/JP03271894A_">http://www.patents.ibm.com/cgi-bin/viewpat.cmd/JP03271894A_</a> >.	1-5

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Date of the actual completion of the international search

11 November 1999 (11.11.99)

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 99/00315

The document discloses an automatic vending machine that enables an operator to use a telephone in the place of a vending machine by connecting the vending machine main body and a telephone set to discharge a commodity from the vending machine main body or permit speech on the telephone by coin input according to the claims 1 to 5.



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR 99/00315

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